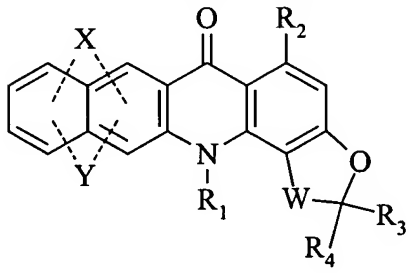
CLAIMS

1. A method for treating a living animal body afflicted with a cancer selected from lung and ovarian carcinoma, comprising the step of administering to the living animal body an amount of a compound selected from those of formula (I):



(I),

wherein :

- **X** and **Y**, which may be the same or different, represent, independently of one another, a group selected from :
  - hydrogen and halogen,
  - mercapto, cyano, nitro, linear or branched (C_1-C_6)alkyl, linear or branched (C_1-C_6)-trihaloalkyl and linear or branched trihalo-(C_1-C_6)alkyl-carbonylamino,
  - groups of formulae -ORa, -NRaRb, -NRa-C(O)-T_1, -O-C(O)-T_1, -O-T_2-NRaRb, -O-T_2-ORa, -NRa-T_2-NRaRb, -NRa-T_2-ORa and -NRa-T_2-CO_2Ra wherein :
    - **Ra** represents a group selected from hydrogen and linear or branched (C_1-C_6)alkyl, aryl and aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched,
    - **Rb** represents a group selected from hydrogen and linear or branched (C_1-C_6)alkyl, aryl and aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched,

      or

      Ra+Rb, together with the nitrogen atom carrying them, form a monocyclic 5- or 6-membered heterocycle optionally containing in the cyclic system a second hetero atom selected from oxygen and nitrogen,
    - **T_1** represents a group selected from linear or branched (C_1-C_6)alkyl, linear or branched (C_2-C_6)alkenyl, aryl, aryl-(C_1-C_6)alkyl (wherein the alkyl moiety is linear or branched), and linear or branched (C_1-C_6)alkylene substituted by a group selected

from -ORa and -NRaRb wherein Ra and Rb are as defined hereinbefore,

* **T_2** represents linear or branched (C_1-C_6)alkylene,

it being understood that the substituents X and Y may be present on either of the two adjacent benzene rings,

- **R_1** represents hydrogen or linear or branched (C_1-C_6)alkyl,

- **R_2** represents a group selected from hydrogen and linear or branched (C_1-C_6)alkyl, -ORa, -NRaRb, -NRa-C(O)-T_1, -O-C(O)-T_1, -O-T_2-NRaRb, -O-T_2-ORa, -NRa-T_2-NRaRb, -NRa-T_2-ORa and -NRa-T_2-CO_2Ra, wherein Ra, Rb, T_1 and T_2 are as defined hereinbefore,

- **R_3, R_4**, which may be the same or different, represent, independently of one another, hydrogen or linear or branched (C_1-C_6)alkyl,

- **W** represents a group of formula -CH(R_5)-CH(R_6)-, -CH=C(R_7)-, -C(R_7)=CH- or -C(O)-CH(R_8)- wherein :

  * **R_5 and/or R_6**, represent, independently of the other, a group selected from -W_1-C(W_2)-W_3-T_1,
  -W_4-C(W_2)-T'$_1$, -W_1-S(O)$_n$-W_3-T_1 and –W_1-S(O)$_n$-T_1 wherein :
  - W_1 represents oxygen or sulphur or nitrogen substituted by hydrogen or by linear or branched (C_1-C_6)alkyl, aryl or aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched,
  - W_2 represents oxygen or sulphur,
  - W_3 represents oxygen or sulphur or nitrogen substituted by hydrogen or by linear or branched C_1-C_6) alkyl, aryl or aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched, a bond when T_1 represents linear or branched (C_2-C_6) alkenyl,
  - W_4 represents sulphur or nitrogen substituted by hydrogen or by linear or branched (C_1-C_6)alkyl, aryl or aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched,
  - T_1 is as defined hereinbefore,
  - T'$_1$ represents a group selected from linear or branched (C_2-C_6)alkenyl, aryl, aryl-(C_1-C_6)alkyl (wherein the alkyl moiety is linear or branched), linear or branched (C_1-

C_6)alkylene substituted by a group selected from -ORa and -NRaRb wherein Ra and Rb are as defined hereinbefore,

- n represents integer selected from 1 and 2,

alternatively, one of R_5 and R_6 represents, independently of the other, a group as defined hereinbefore and the other represents a group selected from hydrogen, hydroxy, linear or branched (C_1-C_6)alkoxy, linear or branched (C_1-C_6)alkyl-carbonyloxy, arylcarbonyloxy, aryl-(C_1-C_6)alkyl-carbonyloxy (wherein the alkyl moiety is linear or branched), and amino optionally substituted by one or two, identical or different, linear or branched (C_1-C_6)alkyl,

* **R_7** represents a group selected from hydroxy, linear or branched (C_1-C_6)alkoxy, -C(W_2)-T_1, -W_1-C(W_2)-W_3-T_1, -W_1-C(W_2)-T_1, -W_1-S(O)$_n$-W_3-T_1 and-W_1-S(O)$_n$-T_1 wherein W_1, W_2, W_3, T_1 and n are as defined hereinbefore, or R_7 may represent hydrogen when R_2 represents -O-T_2-ORa and/or when X represents hydrogen and Y, located in the 13-position of the naphthyl system of the pentacyclic skeleton, represents amino optionally substituted by one or two identical or different groups selected independently of one another from linear or branched (C_1-C_6)alkyl, linear or branched (C_1-C_6)acyl and linear or branched trihalo-(C_1-C_6)alkyl-carbonyl,

* **R_8** represents linear or branched (C_1-C_6)alkoxy or linear or branched (C_1-C_6)alkyl-carbonyloxy, or may have the additional meaning of hydroxy when R_2 represents -O-T_2-ORa as defined hereinbefore,

its enantiomers, diastereoisomers and N-oxides, and addition salts thereof with a pharmaceutically acceptable acid or base, which is effective for alleviation of the cancer,

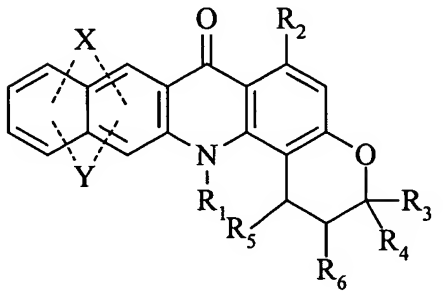
wherein:

aryl being understood to mean phenyl or naphthyl optionally containing one or more, identical or different, substituents selected from hydroxy, halogen, carboxy, nitro, amino, linear or branched (C_1-C_6)alkylamino, di(C_1-C_6)alkylamino wherein each alkyl moiety may be linear or branched, linear or branched (C_1-C_6)alkoxy, linear or branched (C_1-C_6)acyl and

linear or branched (C_1-C_6)alkyl-carbonyloxy,

and optical isomers thereof.

2. A method of claim 1, wherein the compound is selected from those of formula (IA) :



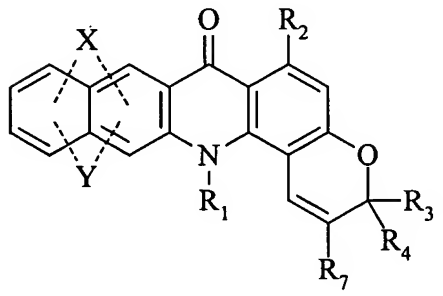
(IA),

3. A method of claim 2, wherein R_5 and R_6 are identical and each represent a group of formula -W_1-C(W_2)-W_3-T_1 or -W_1-S(O)$_n$-T_1.

4. A method of claim 1, wherein R_5 and R_6 are identical and each represent a group of formula -W_1-C(W_2)-W_3-T_1 wherein W_1 represents oxygen, W_2 represents oxygen, W_3 represents nitrogen substituted by hydrogen, linear or branched (C_1-C_6)alkyl, aryl or aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched.

5. A method of claim 1, wherein R_5 and R_6 are identical and each represent a group of formula -W_1-S(O)$_n$-T_1 wherein W_1 represents oxygen.

6. A method of claim 1, wherein the compound is selected from those of formula (IB) :

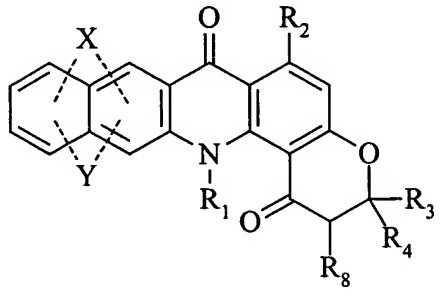


(IB),

7. A method of claim 1, wherein R_7 represents a group selected from $-C(W_2)-T_1$ and $-W_1-C(W_2)-T_1$ wherein W_1, W_2.

8. A method of claim 7, wherein W_1 represents oxygen, W_2 represents oxygen and T_1 represents linear or branched (C_1-C_6)alkyl, aryl or aryl-(C_1-C_6)alkyl wherein the alkyl moiety is linear or branched.

9. A method of claim 1, wherein the compound is selected from those of formula (IC) :

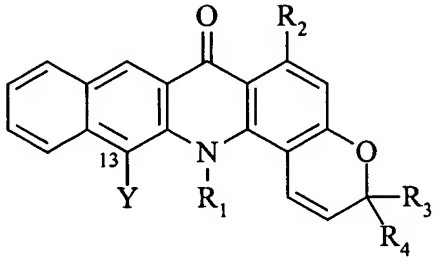


(IC),

10. A method of claim 1, wherein R_3 and R_4, which may be the same or different, represent linear or branched (C_1-C_6)alkyl.

11. A method of claim 1, wherein R_2 represents a group selected from linear or branched (C_1-C_6)alkoxy, -NRaRb, $-O-T_2-NRaRb$, $-O-T_2-ORa$, $-NRa-T_2-NRaRb$ and $-NRa-T_2-ORa$.

12. A method of claim 1, wherein the compound is selected from those of formula (IB_1) :



(IB_1),

wherein Y represents amino optionally substituted by one or two identical or different groups selected independently of one another from linear or branched (C_1-C_6)alkyl, linear

or branched (C_1-C_6)acyl and linear or branched trihalo-(C_1-C_6)alkyl-carbonyl.

13. A method of claim 1, wherein the compound is selected from :

- (1*S*,2*S*)-1-{[(dimethylamino)carbonyl]oxy}-6-methoxy-3,3,14-trimethyl-7-oxo-2,3,7,14-tetrahydro-1*H*-benzo[*b*]pyrano[3,2-*h*]acridin-2-yl dimethylcarbamate and
- (1*S*,2*S*)-6-methoxy-3,3,14-trimethyl-2-{[(4-methylphenyl)sulphonyl]oxy}-7-oxo-2,3,7,14-tetrahydro-1*H*-benzo[*b*]pyrano[3,2-*h*]acridin-1-yl 4-methylbenzenesulfonate,

its enantiomers, diastereoisomers and N-oxides, and addition salts thereof with a pharmaceutically acceptable acid or base.

14. A method of claim 1, wherein the compound is selected from :

- 6-methoxy-3,3,14-trimethyl-7-oxo-7,14-dihydro-3*H*-benzo[*b*]pyrano[3,2-*h*]acridin-2-yl acetate,
- 2-benzoyl-6-methoxy-3,3,14-trimethyl-3,14-dihydro-7*H*-benzo[*b*]pyrano[3,2-*h*]-acridin-7-one,
- 2-butyryl-6-methoxy-3,3,14-trimethyl-3,14-dihydro-7*H*-benzo[*b*]pyrano[3,2-*h*]-acridin-7-one,
- 2-acetyl-6-methoxy-3,3,14-triméthyl-3,14-dihydro-7*H*-benzo[*b*]pyrano[3,2-*h*]-acridin-7-one,
- 6-methoxy-3,3,14-trimethyl-7-oxo-7,14-dihydro-3*H*-benzo[*b*]pyrano[3,2-*h*]acridin-2-yl butyrate,
- 6-(2-hydroxyethoxy)-3,3,14-trimethyl-3,14-dihydro-7*H*-benzo[*b*]pyrano[3,2-*h*]-acridin-7-one,

- 13-amino-6-methoxy-3,3,14-trimethyl-3,14-dihydro-7*H*-benzo[*b*]pyrano[3,2-*h*]-acridin-7-one, and
- *N*-(6-methoxy-3,3,14-trimethyl-7-oxo-7,14-dihydro-3*H*-benzo[*b*]pyrano[3,2-*h*]-acridin-13-yl)acetamide,

its enantiomers, diastereoisomers and N-oxides, and addition salts thereof with a pharmaceutically acceptable acid or base.

15. A method of claim 1, wherein the compound is 6-methoxy-3,3-dimethyl-1,7-dioxo-2,3,7,14-tetrahydro-1*H*-benzo[*b*]pyrano[3,2-*h*]acridin-2-yl acetate, its enantiomers, diastereoisomers and N-oxides, and addition salts thereof with a pharmaceutically acceptable acid or base.